

50

DART AEROSPACE LTD	Work Order:	21910
Description: Doubler	Part Number:	D3144-111
Dwg: D3144 Rev. B	Qty:	9 10
		Page 1 of 1

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	HA	04.11.30	10
2	PG	Issue P/O: <u>7071542</u> Email or Ship DXF file to vendor Laser Cut D3144-111 flat pattern per Dwg D3144 Possible Supplier: GFI or Industrial Laser Material release note is required	LL	05-02-11	10
3	RG	Receive and Inspect for transit damage Enure material release note is attached	CL	05/03/01	10
4	QC6	Inspect dimensions as per Dwg D3144	TH	05.03.10	9
5	GA	Deburr	SB	05/04/12	9
6	FP	Chemical Conversion Coat per QSI 005 4.1	ml	05-04-13	9
7	FP	Powder Coat Black Sandtex (Ref: 4.3.5.7) per QSI 005 4.3	WFF	05/04/15	9
8	QC3	Inspect Powder Coat	ml	05-04-25	9
9	ST	Identify and Stock	ml	05-04-25	9
10	AC	Cost / part: <u>21.20</u>	5cc	05-04-26	9
11	DC	Close W/O <u>20.90</u> Inspect Level 21	HA	05.01.29	9

Rev	Date	Change	Revised By	Approved
A	04.11.29	New issue	KJ/RF	

RELEASED
04/11/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector
05.03.10	4	(1) KEPT IN STORE FOR TEMPLATE	RF	05.03.10	1	RF 05.03.10	AB 05.04.29

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

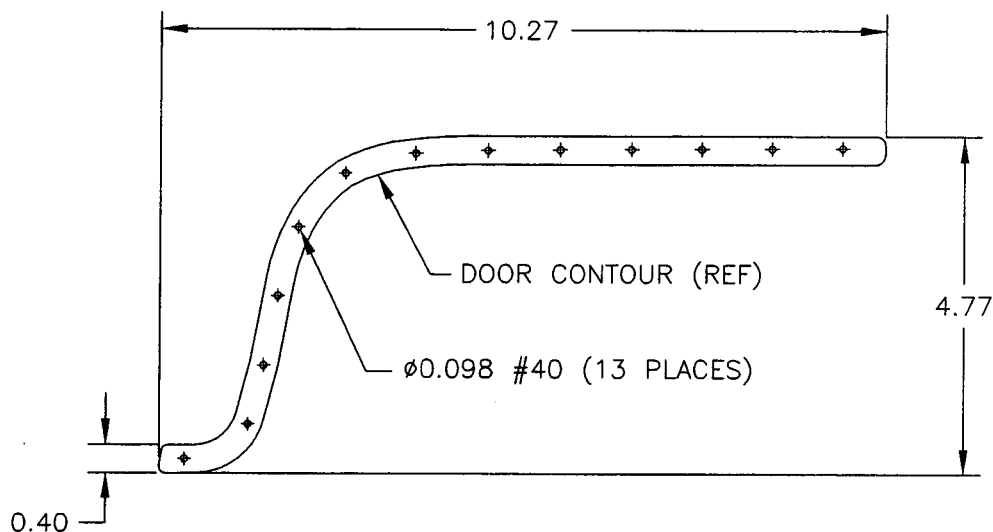
NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____



DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D3144	REV. B SHEET 9 OF 9
DATE 04.09.17		TITLE DOUBLER	SCALE NTS

RELEASED
04.11.23



D3144-111 DOUBLER (FOR D412-694-01/-02) SHOP COPY

RETURN TO
ENGINEERING

UNCONTROLLED COPY

SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER

NO. 21910

D3144-111 NOTES:

- 1) MATERIAL: 2024-T3 SHEET (QQ-A-250/4) 0.032 THICK (REF DART SPEC M2024T3S.032)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 6) MACHINE PER DRAWING "D3144-B9.DWG"

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Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Nov 17, 2004
07:47 am

Work Order No : 0021910
Project Name : D3144-111
Project For : WK450
Work Order Type : Main
Main WO Number :
House Part Number : D3144-111
Description : Doubler
Manufactured : Yes
Amount Req'd : 10
Amount Done : 0
Start Date : 11-16-04
Est Finish Date : 12-04-04
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Margin : 0.000%
Actual Margin : 0.000%
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

CERTIFICATE OF COMPLIANCE
CERTIFICAT DE CONFORMITE



Membre de / A Member of **Thomas Betts**

180 LABROSSE AVENUE
POINTE CLAIRE, QC
H9R 1A1

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO. 1 OUR JOB NO J0124328 SHIPPING MEMO 0292751
ITEM QUANTITY PURCHASE ORDER PART NUMBER REV NAME DWG ISSUE
10 PCS 2007542 D3144-111 DOUBLER B
MATERIAL SUPPLIED BY MAT. REL. NO.
AL 2024-T3 (QQ-A-250/4) SAMUEL / KAISER ALUMINUM 226511 ATT'D

	PROCESS	PROCESSOR	RELEASE NOTE #
1			
2			
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE 24 FEBRUARY 2005

G.F.I. Q.C. REP.

Quentin H. Smith

Programme d'Assurance Qualité Enregistré / Registered Q.A. Program
ISO 9001:2000 AS9100

LETTRE DE CONFORMITÉ – LETTER OF COMPLIANCE

Date: 7 JANVIER 2005

Company Name: G.F.I. Division of Thomas & Betts, Limited
Address: 180 avenue Labrosse
City: Pointe Claire, Qué.
Zip Code: H9R 1A1

du client: 0058243

Customer's order #:

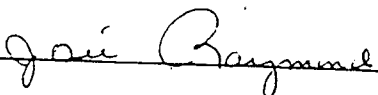
de commande SSMQ: 834566
SSMQ's Order #:

La présente est pour certifier que le matériel détaillé ci-dessous est conforme aux exigences de votre commande et des normes du grade tel que décrit:

The following is to certify that the material listed below meets your order requirements and grade standards as described:

otre/Our Item #	# de pièces/ # of pieces	Épaisseur/Grandeur Guage/Size	Alliage/Trempe Alloy/Temper	Spécification / Specification	Lot/Heat
2	2	.032" x 48" x 144"	2024 T3	AMS-QQ-A-250/4	226511

Bien à vous,
Yours truly,



Commis à l'administration.
Administration Clerk.



SHIP TO: LES METAUX SPECIALISES SAMUEL (SHIP TO) 21525 CLARK GRAHAM BAIE D'URFE, PQ, CA H9X3T5
SOLD TO: SAMUEL SON & CO LTD 2225 FRANCIS HUGHES LAVAL, PQ, CA H7S1N5

KAISER
ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4011938

CUSTOMER PO NUMBER: N16221		CUSTOMER PART NUMBER:		SHIPPING RUN #/LOAD ID: 100089/2		GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1008983	LINE ITEM: 1	SHIP DATE: 9-JUL-2004		ALLOY: 2024	CLAD: BARE	TEMPER: T3	
WEIGHT SHIPPED: 3928 LB	QUANTITY: 173 PCS EST.	B/L NUMBER: 202031		GAUGE: 0.0320 IN	WIDTH: 48.00 IN	LENGTH: 144.000 IN	

Certified Specifications

AMS 4037/RevN

AMS-QQ-A-250/4/RevA

ASTM B 209/Rev04

Test Code: 1504

Test Results

Lot: 226511 Cast Drop Ingot

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T3	LT / 2 (Min:Max)	67.4 : 67.6 (465 : 466)	45.2 : 45.3 (312 : 312)	17.8 : 18.3

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.22	4.46	0.55	1.32	0.01	0.17	0.01	0.01	0.00	TOT 0.06

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
2024 MIN	0.00	0.00	3.80	0.30	1.20	0.00	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.50	0.50	4.90	0.90	1.80	0.10	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

CERTIFICATION

KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772 (MIL-H-6088). ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

Bill Poy